Wi-SUN Alliance
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Ms. Marlene Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

**RE: NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice (DA/FCC #: DA-24-776, Docket No: 24-240RM-11989)**

Dear Ms. Dortch,

The Wi-SUN Alliance thanks the Wireless Telecommunications Bureau and the Office of Engineering and Technology of the Federal Communications Commission for the opportunity to provide feedback to NextNav's petition for rulemaking in the 902-928MHz Band.

The Wi-SUN Alliance is a global non-profit industry association with more than 300 industry stakeholder members including silicon vendors, product vendors, services providers, utilities, universities, enterprises, municipalities, and local government organizations devoted to seamless connectivity of wireless products from multiple vendors. Together we promote certified products using open standards that coordinate various wireless systems and standardize power levels, data rates, modulations, and frequency bands, channel plans and channel access mechanisms to allow multi-vendor interoperability and coexistence in large scale industrial IoT networks.

Through technology development, market building, and certification programs, Wi-SUN Alliance is committed to supporting the worldwide development of Wireless Mesh Communications Networks particularly for the Utility Industry, including Electricity, Gas and Water, as well as a range of large scale IoT applications in Smart Cities and other challenging IoT networks.

The Wi-SUN Alliance stakeholder members deliver solutions using mesh radio technologies in the 902-928 MHz band operating under FCC Part 15 rules. These existing Part 15 rules encourage friendly co-existence, a fundamental readily achieved with current radio technologies, resulting in a pragmatic, predictable and highly efficient use of spectrum for narrowband communications in the industrial IoT sector. NextNav states that the band is underutilized; however, the current rules for the frequency band have been in place for many years and have seen very large adoption by a wide range of applications and industries, with tried and tested coexistence of many diverse products. Data from Guidehouse's Global AMI Tracker 4Q23 estimates that there are more than 120 million Wi-SUN capable electricity meters already deployed and using this frequency band. This number continues to grow.

For more than a decade, Wi-SUN Alliance member companies and their customers have seen great success of implementations of mesh networks operating in this frequency band for very large-scale smart grid infrastructure and other smart city applications such as streetlighting.

Reliable operation of electricity networks is crucial to the operation of modern society. Recent global weather events have demonstrated the potential impact on society when these networks are disrupted. Energy networks are facing further challenges of narrowing generation resource and the need to amalgamate renewable (but intermittent) energy sources. The creation of a ‘Smart Grid’, therefore, is an imperative for all industrialised nations. Smart Grids monitor and control electricity flows and exploit modern communications technologies based on open standards to enable consumers to manage their energy use better, facilitate the integration of renewable energy sources and electric vehicles, and enable intelligent energy management over the next ten years. It is important to recognize that Smart Grid operation goes far beyond simply “smart meters” but includes utility critical infrastructure including Distribution Automation (switch re-closers, capacitor bank controllers, voltage regulators, etc.) as well as the connection of Distributed Energy Resources such as PV/solar and battery storage. Smart Grids require very large numbers of devices (from many tens of thousands to, in some cases, millions) to communicate with one another anywhere, reliably, securely, and affordably. Wi-SUN Alliance and our member companies have adopted open-standards technology that is proven to operate reliably and securely in very large-scale networks, under the current rules. The NextNav proposal threatens to disrupt the current operation of an installed base of millions of devices, with no adequate method to assess the impact on existing networks, or how to mitigate any disruption caused to national critical infrastructure.

In addition to smart grid and other utility applications, there is a diverse and growing set of products and services that serve the public interest that would be squelched by the NextNav proposal. Specifically, a growing number of cities are deploying streetlight “canopy” networks that utilize the sub-GHz license-exempt bands to not only enable management of the streetlights themselves, but to provide the communications fabric for many additional “Smart City” applications such as traffic management, smart parking, smart signage, air quality measurement and structural integrity monitoring.

The continued availability of this band operating under the current rules, therefore, is essential to ensure uninterrupted communications of these smart networks. These networks provide the infrastructure for applications which have successfully delivered and continue to deliver significant economic and societal benefits. The impact to existing, and growing, utility and smart city networks networks resulting from these proposed rule changes would be enormous; negatively impacting critical infrastructure reliability, creating financial havoc on rate cases for utilities and regulatory commissions, and seriously impeding the nation’s capability to meet its greenhouse gas reduction goals.

Yours sincerely,

P. Be

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cc:
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